Title (en)

POSITIVE ELECTRODE ACTIVE MATERIAL FOR LITHIUM ION SECONDARY BATTERY, AND LITHIUM ION SECONDARY BATTERY

Title (de)

POSITIVES AKTIVES ELEKTRODENMATERIAL FÜR EINE LITHIUM-IONEN-SEKUNDÄRBATTERIE SOWIE LITHIUM-IONEN-SEKUNDÄRBATTERIE

Title (fr)

MATÉRIAU ACTIF D'ÉLECTRODE POSITIVE POUR BATTERIE SECONDAIRE AU LITHIUM-ION ET BATTERIE SECONDAIRE AU LITHIUM-ION

Publication

EP 4033565 A1 20220727 (EN)

Application

EP 20864858 A 20200918

Priority

- JP 2019170438 A 20190919
- JP 2020035589 W 20200918

Abstract (en)

To provide a positive electrode active material capable of further reducing positive electrode resistance and exhibiting better output characteristics.A positive electrode active material includes a coating layer formed of a metal composite oxide of Li and one or more metal elements selected from Al, Ti, Zr, Nb, Mo, and W on at least a part of a surface of lithium transition metal-containing composite oxide particles, and has d50 of 3.0 to 7.0 μm, a BET specific surface area of 2.0 to 5.0 m²/g, a tap density of 1.0 to 2.0 g/cm³, and an oil absorption amount of 30 to 60 ml/100 g, in which the amount of metal elements other than Li contained in the coating layer is 0.1 to 1.5 atom% with respect to the total number of atoms of Ni, Mn, and Co contained in the composite oxide particles.

IPC 8 full level

H01M 4/36 (2006.01); **H01M 4/505** (2010.01); **H01M 4/525** (2010.01); **H01M 10/052** (2010.01); **H01M 10/0562** (2010.01)

CPC (source: CN EP US)

H01M 4/366 (2013.01 - EP); **H01M 4/505** (2013.01 - CN US); **H01M 4/525** (2013.01 - CN EP US); **H01M 4/624** (2013.01 - CN EP); **H01M 10/0427** (2013.01 - EP); **H01M 10/0525** (2013.01 - CN EP US); H01M 2004/021 (2013.01 - CN US); H01M 2004/028 (2013.01 - CN EP US); Y02E 60/10 (2013.01 - EP)

Cited by

CN115403080A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 4033565 A1 20220727; **EP 4033565 A4 20231025**; CN 114424369 A 20220429; CN 114424369 B 20241001; JP 7235130 B2 20230308; JP WO2021054467 A1 20210325; US 2022344656 A1 20221027; WO 2021054467 A1 20210325

DOCDB simple family (application)

EP 20864858 A 20200918; CN 202080065825 A 20200918; JP 2020035589 W 20200918; JP 2021546999 A 20200918; US 202017761892 A 20200918